

AMENDMENTS

Amendments to the Claims

This listing of claims replaces all prior versions and listings of the claims in the application:

1. (Original) A device for use in a molten metal pump, the device comprising: an inlet structure defining one or more openings through which molten metal can pass; and a displacement structure connected to the inlet structure, the displacement structure including one or more rotor blades for displacing molten metal; wherein as the device is rotated, both the inlet structure and displacement structure rotate.
2. (Original) The device of claim 1 that further includes a bearing surface.
3. (Original) The device of claim 2 wherein the bearing surface includes one or more grooves to help alleviate a build up of molten metal between the bearing surface and a corresponding bearing surface on a pump base.
4. (Original) The device of claim 1 wherein the one or more rotor blades are comprised of graphite.
5. (Original) The device of claim 1 wherein the one or more rotor blades are imperforate.
6. (Original) The device of claim 1 wherein the inlet structure is comprised of graphite.
7. (Original) The device of claim 1 wherein the inlet structure is comprised of ceramic.
8. (Original) The device of claim 1 wherein each of the one or more rotor blades has a portion that directs molten metal downward into a pump chamber and a portion that directs molten metal outward towards the wall of the pump chamber.
9. (Original) The device of claim 1 wherein there are three openings.
10. (Original) The device of claim 1 wherein there are three rotor blades.
11. (Original) The device of claim 1 that includes a threaded connective portion for connecting to a rotor shaft.
12. (Original) A pump for pumping molten metal, the pump comprising: (a) a motor; (b) a pump base including a pump chamber and a discharge; (c) a device at least partially positioned in the pump chamber, the device comprising: (i) an inlet structure defining one or more openings through which molten metal can pass; (ii) a displacement structure connected to the inlet structure, the displacement structure for displacing molten metal; and (d) a drive shaft connecting the motor to the device; wherein as the device is rotated, both the inlet structure and displacement structure rotate.

13. (Original) The pump of claim 12 that further includes a superstructure connected to the pump base by one or more support posts.
14. (Original) The pump of claim 12 wherein the motor is positioned on the superstructure.
15. (Original) The pump of claim 12 wherein the drive shaft comprises a motor shaft having a first end and a second end, a coupling having a first end and a second end, and a rotor shaft having a first end and a second end, the first end of the motor shaft being connected to the motor and the second end of the motor shaft being connected to the first end of the coupling, the first end of the rotor shaft being connected to the second end of the coupling and the second end of the rotor shaft being connected to the device.
16. (Original) The pump of claim 12 wherein the device further includes a bearing surface.
17. (Original) The pump of claim 16 wherein the bearing surface includes one or more grooves to help alleviate a build up of molten metal between the bearing surface and a corresponding bearing surface in the pump base.
18. (Original) The pump of claim 12 wherein the displacement structure is one or more rotor blades.
19. (Original) The pump of claim 18 wherein the one or more rotor blades are comprised of graphite.
20. (Original) The pump of claim 18 wherein the one or more rotor blades are imperforate.
21. (Original) The pump of claim 12 wherein the inlet structure is comprised of graphite.
22. (Original) The pump of claim 12 wherein the inlet structure is comprised of ceramic.
23. (Original) The pump of claim 18 wherein each of the one or more rotor blades has a portion that directs molten metal downward and a portion that directs molten metal outward.
24. (Original) The pump of claim 12 wherein the pump base has a tangential discharge.
25. (Original) The pump of claim 12 that is a transfer pump and includes a metal-transfer conduit connected to the discharge.
26. (Original) The pump of claim 25 wherein the metal-transfer conduit is connected to the pump base without the use of cement or other sealant.
27. (Original) The pump of claim 12 that further includes a gas-release device for releasing gas into a molten metal stream generated by the pump.
28. (Original) The pump of claim 31 wherein the gas-release device comprises a gas-transfer

conduit having an end connected to the pump discharge for releasing gas into molten metal passing through the pump discharge.

29. (Original) The pump of claim 31 that includes a metal-transfer conduit extending from the pump discharge and a gas-transfer conduit having an end connected to the metal-transfer conduit for transferring gas to the metal-transfer conduit.
30. (Original) The pump of claim 12 wherein there are three openings.
31. (Original) The pump of claim 12 wherein there are three rotor blades.
32. (Original) The pump of claim 12 wherein the device includes a threaded connection for connecting to a rotor shaft.
33. (Withdrawn) An impeller for use in a molten metal pump, the impeller for mounting in a pump chamber and for displacing molten metal entering the pump chamber, the impeller including a bearing surface and one or more grooves on the bearing surface, the grooves for reducing the build up of molten metal between the bearing surface and a corresponding bearing surface on a pump base.
34. (Original) A device for use in a molten metal pump, the device comprising: an inlet structure defining one or more openings through which molten metal can pass; and a displacement structure connected to the inlet structure, the displacement structure for displacing molten metal; wherein as the device is rotated, the inlet structure and displacement structure rotate.